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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,642	02/25/2004	David J. Stroh	GP-303617	3113

7590 04/18/2007

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EXAMINER	
BUKOWCZYK, JEREMY	
ART UNIT	**PAPER NUMBER**
3609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,642	STROH, DAVID J.	
	Examiner	Art Unit	
	Jeremy Bukowczyk	3609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-9 and 11-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Takenaka et al. (US 6,963,185 B2).

Takenaka discloses a robot apparatus having movable parts (Fig. 1), the apparatus comprising: a moving means for moving the robot apparatus (col. 5, lines 34-37); and more than one load sensor (50) that detects, as an external force, a reaction applied when the moving means contacts a ground surface (col. 6, lines 25-32); and wherein the load sensor that includes a pressure detecting means (col. 26, lines 26-29) having a pressure-sensitive portion that converts a pressure into an electrical signal (col. 6, lines 28-32), a pressing member (109) which is deformed correspondingly to the magnitude of the external force and presses the pressure detecting means (col. 6, lines 25-32), and a stopper function to limit the external force so that the pressure to the pressure-sensitive portion of the pressure detecting means is smaller than a predetermined threshold (col. 12, lines 45-47).

As per claim 2, Takenaka discloses a moving means that is a leg of the robot apparatus (col. 5, lines 34-37); and the leg having provided therein more than one load sensor/sensors and each of which detects, as an external force, a reaction applied when the moving means contact a ground surface (col. 6, lines 25-32).

As per claim 3, Takenaka discloses a pressing member (109) including: an activating member (50) that is applied with the external force; a driving member (104) that presses the pressure-sensitive portion (50); and an elastic member that couples the driving and activating members to each other and displaces linearly in response to the external force (col. 8, lines 17-19).

As per claim 4, Takenaka discloses a peripheral portion (109); and when the pressing member is applied with an external force, the activating member conveys the external force to the driving member via the elastic member (col. 8, lines 17-19), and when a further external force is applied, the activating member abuts the peripheral portion of the pressure detecting means to limit the external force (col. 8, lines 34-40).

As per claim 5, Takenaka discloses a peripheral portion of the pressure detecting means that is formed thicker than the pressure-sensitive portion (col. 8, lines 30-34).

As per claim 6, Takenaka inherently discloses a gap smaller than a critical linear displacement the elastic member attains in response to the external force as evidenced by figure 3.

As per claim 7, Takenaka discloses an elastic member (106) formed from a spring (70) engaged on each of the step portion and flange and couples the activating and driving members to each other (Fig. 3).

As per claim 8, Takenaka discloses a case assembly (103) that supports the pressure detecting means and pressing member (Fig. 3).

As per claim 9, Takenaka discloses the activating member conveying the external force to the driving member (104) via the elastic member (106) and when a

further external force is applied, the activating member abuts the peripheral portion (109) of the pressure detecting means to limit the external force as evidenced by figure 3.

As per claim 11, Takenaka discloses a plate-shaped pressure detecting means (104) having strain gauges installed on a pressure sensitive portion (50) and being made to abut the pressure detecting means when a predetermined load is applied (col. 6, liens 25-32).

As per claim 12, Takenaka discloses a load sensor wherein a thicker portion (104) is formed around the pressure-sensitive portion (50) and the activating member abuts the thick portion (Fig. 3).

As per claim 13, Takenaka discloses a gap smaller than a critical linear displacement the elastic member attains in response to the external force (col. 8, lines 17-19).

As per claim 14, Takenaka inherently discloses a load sensor where the driving member (104) has a flange that abuts the pressure-sensitive portion (50); and the activating member has a step portion that presses the driving member, the elastic member (106) being formed from a spring (70), engaged on each of the step portion and flange and that couples the activating and driving members to each other as evidenced by figure 3.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takenaka et al. (US 6,963,185 B2), in view of Ishida et al. (US 6,832,132 B2).

Takenaka discloses all the claimed elements as mentioned in claims 1 and 2, but fails to disclose more than one load sensor/sensors in number and provided in either the instep or sole member.

Ishida in the same field of invention discloses more than one load sensor/sensors in number and provided in either the instep or sole member (col. 11, lines 22-25).

From this teaching of Ishida, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot apparatus of Takenaka to include more than one load sensor/sensors in number and provided in either the instep or sole member as taught by Ishida, in order for a robot to continue its operation without falling (col. 1, lines 20-26).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mc Collum Etchason et al. discloses a power train having a controller for limiting the torque and power inputs to a transmission as determined by operating parameters and design features of the transmission. Taffin et al. discloses a fully automatic transmission and control unit that inhibits the action of the torque demand information. Stroh discloses a torque request generation system for use with a coordinated torque control system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Bukowczyk whose telephone number is 571-270-3022. The examiner can normally be reached on Mon-Thu 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jb

BENNY TIEU
PRIMARY EXAMINER